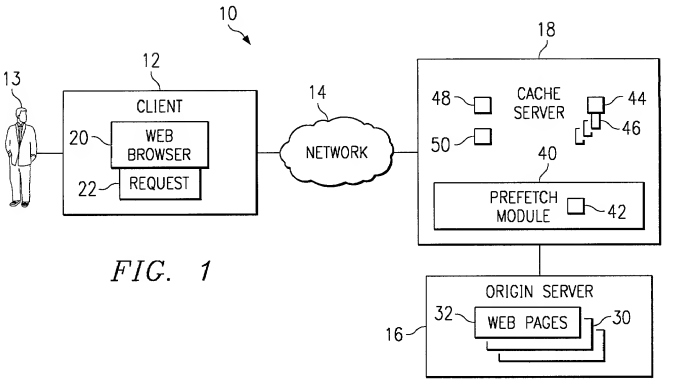
10
18
12
13
14
CLIENT
20
WEB BROWSER
22
REQUEST
NETWORK
48
CACHE SERVER
44
46
50
40
PREFETCH MODULE
42
ORIGIN SERVER
32
WEB PAGES
30
16

FIG. 1

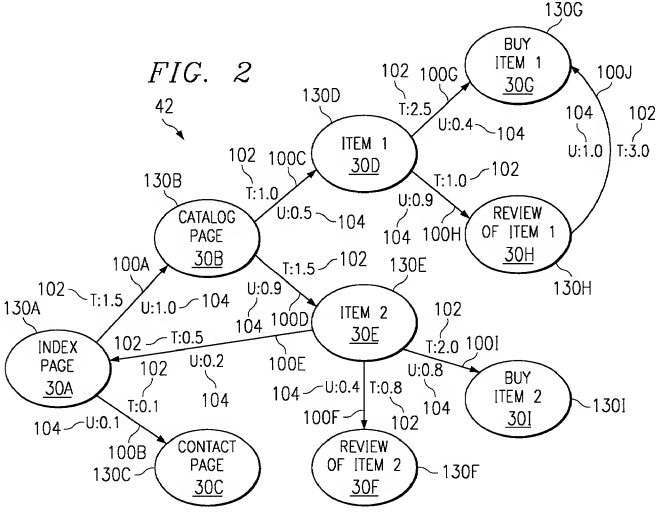
42
130G
BUY ITEM 1 30G
130D
ITEM 1 30D
130B
CATALOG PAGE 30B
130E
ITEM 2 30E
130A
INDEX PAGE 30A
130C
CONTACT PAGE 30C
130F
REVIEW OF ITEM 2 30F
130H
REVIEW OF ITEM 1 30H
130I
BUY ITEM 2 30I
100A
100B
100C
100D
100E
100F
100G
100H
100I
100J
102
104
T:2.5
U:0.4
T:1.0
T:1.5
U:0.5
U:0.9
T:0.5
U:0.2
T:0.1
U:0.1
T:0.8
U:0.8
T:2.0
U:1.0
T:3.0

FIG. 2

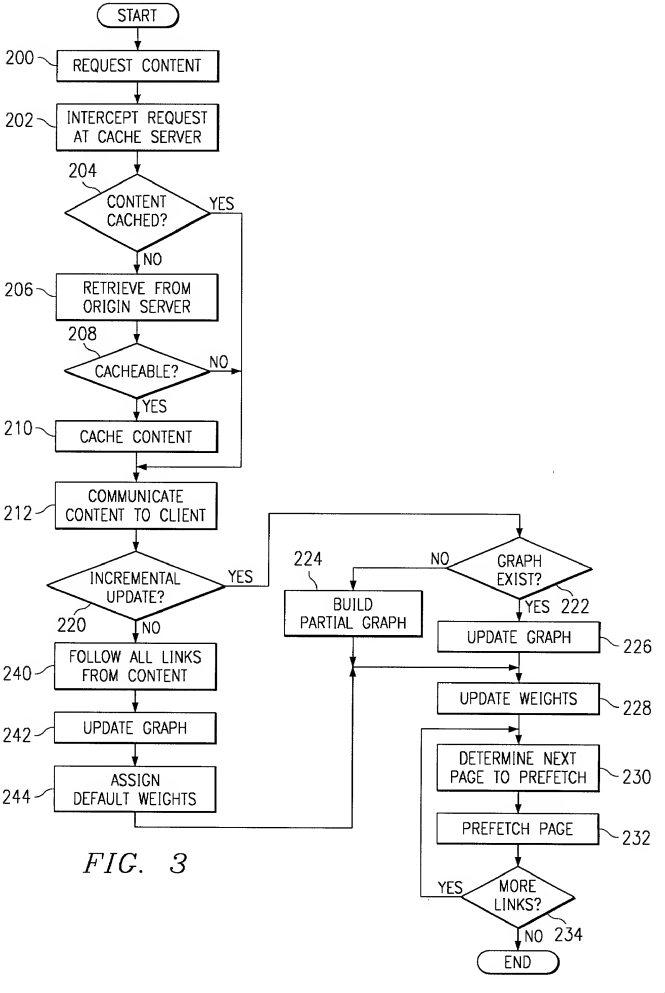
START
200
REQUEST CONTENT
202
INTERCEPT REQUEST AT CACHE SERVER
204
CONTENT CACHED?
YES
NO
206
RETRIEVE FROM ORIGIN SERVER
208
CACHEABLE?
NO
YES
210
CACHE CONTENT
212
COMMUNICATE CONTENT TO CLIENT
INCREMENTAL UPDATE?
YES
220
NO
240
FOLLOW ALL LINKS FROM CONTENT
242
UPDATE GRAPH
244
ASSIGN DEFAULT WEIGHTS
224
BUILD PARTIAL GRAPH
NO
GRAPH EXIST?
YES 222
UPDATE GRAPH
226
UPDATE WEIGHTS
228
DETERMINE NEXT PAGE TO PREFETCH
230
PREFETCH PAGE
232
YES
MORE LINKS?
NO 234
END

FIG. 3